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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,230	09/28/2001	Charles W. Shattuck	091395-9194 (4132-TC-AU)	5871

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EXAMINER

HANSEN, COLBY M

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/966,230

Applicant(s)

SHATTUCK ET AL.

Examiner

Colby Hansen

Art Unit

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NW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

Applicant's election of Group I in Paper No. 8 1/2 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 13-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8 1/2.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "first and second component relationship" of claim 2; and the "stacked" second component, as claimed in claim 10, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Nowhere within the specification or drawings is the axially extending lip portion of the first race component is radially inward of the raceway portion of the first race component.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 3, it is unclear what is meant by “the axially extending lip portion of the first race component is radially inward of the raceway portion of the first race component”.

Regarding claim 10, it is unclear what the term “staked” means with regard to the second race component.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4, 6, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Critchley et al. (US Pat. 5,927,868).

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Critchley et al. (US Pat. 5,927,868) discloses a thrust bearing with needle rollers 16, the thrust bearing comprising: a first race component 22 made of a first material and including a flat, circular raceway portion, defined about an axis, and an axially extending lip portion; a plurality of needle rollers arranged radially with respect to the axis for rolling contact with the flat raceway portion of the first race component; a bearing cage 18 retaining the needle rollers and engageable with the lip portion of the first component for piloting of the bearing cage; and a second race component 34 made of a second material and including a flat portion in contact with the raceway portion of the first race component and, also, including a lip portion extending axially and radially from the flat portion and beyond the lip portion of the first race component such that the second race component is engageable by the bearing cage to hold the first race component, the second race component and the bearing cage together as an assembly; wherein the axially extending lip portion of the first race component is radially inward of the raceway portion of the first race component; further comprising an additional thrust race 26 including a circular raceway portion for rolling contact with the rollers the rollers being positioned between the circular raceway portions of the first race component and the additional thrust race.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 2, 5, 7-9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Critchley et al. (US Pat. 5,927,868).

Critchley et al. (US Pat. 5,927,868) discloses the claimed invention except for the second component being radially outward of the race way or the use of different materials for the first and second components.

Regarding the position of the second component being radially outward of the raceway, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have reversed the second component to be radially outward of the raceway so as to conform the intended surrounding structures or aid in assembly, since it has been held that a mere reversal of the essential working parts of a device involve only routine skill in the art. In re Einstein, 8 USPQ 167.

Regarding the materials, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used different, specialized materials for the first and second components to aid in assembly or to conform to structural strength, weight, etc. needs for the bearing unit, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Critchley et al. (US Pat. 5,927,868) in view of the prior art of the applicant.

Critchley et al. (US Pat. 5,927,868) discloses the claimed invention except for the use of stakes to fix the first and second components together. Applicants "Background of the

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Invention", on page 1/lines 19-21, (figures 2-4), discloses the use of stakes as a means of fixturing to components of a thrust bearing together to be old and well known in the art. As such it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized staked connections between the first and second components of Critchley et al. (US Pat. 5,927,868) so as provide a strong, durable connection without the need for unnecessary equipment (i.e. arc welders, soldering irons, glues, etc.).

Claims 1-9, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. (US Pat. 6,106,158) in view of Bowen III (US Pat. 3,370,898).

Hayashi et al. (US Pat. 6,106,158) discloses a thrust bearing with needle rollers 4, the thrust bearing comprising: a race component 1,2 made of a first material and including a flat, circular raceway portion, defined about an axis, and an axially extending lip portion; a plurality of needle rollers arranged radially with respect to the axis for rolling contact with the flat raceway portion of the first race component; a bearing cage 3c retaining the needle rollers and engageable with the lip portion of the component for piloting of the bearing cage (position of the second component relative to the raceway depends on the interpretation of which component 1,2 is deemed to be the first bearing arrangement comprising the first and second components).

However Hayashi et al. (US Pat. 6,106,158) does not disclose the use of a liner component for the raceway or lip guide.

Bowen III (US Pat. 3,370,898) discloses a thrust bearing with a first liner component have a raceway and a lip guide integrally connected with a second bearing component.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the race/guide liner of Bowen III (US Pat. 3,370,898) within Hayashi et al. (US Pat. 6,106,158) so as to allow for the transmission of thrust and radial forces between two materially different components, as suggested by Hayashi et al. (US Pat. 6,106,158).

Regarding the materials, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used different, specialized materials for the first and second components to aide in assembly or to conform to structural strength, weight, etc. needs for the bearing unit, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. (US Pat. 6,106,158) in view of Bowen III (US Pat. 3,370,898), as applied to claims 1-9 and 11-12, in view of the prior art of the applicant.

Hayashi et al. (US Pat. 6,106,158) discloses the claimed invention except for the use of stakes to fix the first and second components together. Applicants "Background of the Invention", on page 1/lines 19-21, (figures 2-4), discloses the use of stakes as a means of fixturing to components of a thrust bearing together to be old and well known in the art. As such it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized staked connections between the first and second components of Hayashi et

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al. (US Pat. 6,106,158) so as provide a strong, durable connection without the need for unnecessary equipment (i.e. arc welders, soldering irons, glues, etc.).

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is (703) 872-9306. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence **not** permitted by facsimile transmission, see MEP. 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check **should not be** submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MEP. 512). The following is an example of the format the certification might take:

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Typed or printed name of person signing this certificate:

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MEP. 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

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Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colby Hansen whose telephone number is (703) 305-1036. The examiner can normally be reached on Monday through Thursday and every other Friday from 7:30 PM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci, can be reached on (703) 308-3668. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168.

Colby M. Hansen

Patent Examiner

 5/3/04


DAVID A. BUCCI 5/3/04
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3682